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EXAMINER

MOORE JR, MICHAEL J

ART UNIT PAPER NUMBER

2666

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/709,532

Applicant(s)

BOWES, MICHAEL J.

Examiner

Michael J. Moore, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims **1-12, 14, and 16-38** are rejected under 35 U.S.C. 102(b) as being anticipated by Beuk et al. (U.S. 5,774,673) ("Beuk"). Beuk teaches all of the limitations of the listed claims with the reasoning that follows.

Regarding claim 1, "transmitting a packet request message from a first station to a second station" is anticipated by the activation message 500 sent by apparatus 100 (first station) to apparatus 101 (second station) of Figure 2.

"Determining if the packet request message is valid" is anticipated by the verification whether a message has been received correctly by message receiving means 210 of Figure 2 as described in column 13, lines 24-25.

"Transmitting a request acknowledge message from the second station to the first station" is anticipated by the acknowledgement frame 502 sent from apparatus 101 (second station) to apparatus 100 (first station) of Figure 2.

"Determining if the request acknowledge message is valid" is anticipated by the acknowledgement frame comparison spoken of in column 4, lines 38-48.

"Wherein the packet request message and the request acknowledge message each include a control bit string, an identification bit string, and at least one parity bit" is

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anticipated by the TYPE fields (control bit string) shown in the frames of Figure 3 and spoken of on column 12, lines 36-43, the channel fields (identification bit string) shown in frames 630 and 640 of Figure 3 and spoken of on column 11, line 66 – column 12, line 2, and the parity bits comprised in a message frame shown in the frames of Figure 3 and spoken of in column 13, lines 25-30 as well as the one bit ACK field (parity bit) in the acknowledgement frames 620 and 640 of Figure 3.

“The control bit string identifying whether a frame is a control frame or a data frame” is anticipated by the TYPE fields shown in Figure 3 and spoken of on column 12, lines 36-43 that are used to distinguish between an acknowledgement frame (control) and a message frame (data).

Lastly, “the identification bit string correlates the packet request message with a corresponding request acknowledge message” is anticipated by the channel field (identification bit string) shown in group frame 630 (packet request message) of Figure 3 that is copied (correlates) to the channel field of acknowledgment frame 640 (request acknowledgement message) of Figure 3 and that is used to filter acknowledgement messages as spoken of on column 4, lines 38-48 and column 12, lines 19-28.

Regarding claim 2, “the step of generating the packet request message” is anticipated by the activation message 500 sent by apparatus 100 (first station) to apparatus 101 (second station) of Figure 2. “Wherein said generated packet request message includes a request control code group and a request data code group” is anticipated by the TYPE fields (request control code group) of frames 610 and 630

shown in Figure 3 as well as the DATA fields (request data code group) of frames 610 and 630 shown in Figure 3.

Regarding claim 3, “generating a request non-payload bit string corresponding to a pre-programmed packet request register” is anticipated by the TYPE fields (request non-payload bit string) of frames 610 and 630 shown in Figure 3.

Regarding claim 4, “generating a request data code group bit string having at least one request parity bit and at least one request identification bit” is anticipated by the parity bits comprised in a message frame spoken of in column 13, lines 25-30 as well as the channel fields (identification) shown in frames 610 and 630 of Figure 3.

Regarding claim 5, “generating a first request parity bit corresponding to a parity of said request control code group bit string and a second request parity bit corresponding to a parity of said request data code group” is anticipated by the parity bits comprised in a message frame spoken of in column 13, lines 25-30.

Regarding claim 6, “the step of generating the request acknowledge message” is anticipated by the acknowledgement frame 502 sent from apparatus 101 (second station) to apparatus 100 (first station) of Figure 2. “Wherein the request acknowledgement message includes an acknowledge control code group and an acknowledge data code group” is anticipated by the TYPE fields (acknowledge control code group) of frames 620 and 640 shown in Figure 3 as well as the ACK fields (acknowledge data code group) of frames 620 and 640 shown in Figure 3.

Regarding claim 7, “generating an acknowledge non-payload bit string corresponding to a pre-programmed packet acknowledge register” is anticipated by the

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TYPE fields (acknowledge non-payload bit string) of frames 620 and 640 shown in Figure 3.

Regarding claim 8, "generating an acknowledge data bit string having at least one acknowledge parity bit and at least one acknowledge identification bit" is anticipated by the ACK field (parity field) in the acknowledgement frames 620 and 640 of Figure 3.

Regarding claim 9, "a first acknowledge parity bit corresponding to a parity of said acknowledge control code group and a second acknowledge parity bit corresponding to a parity of said acknowledge data code group" is anticipated by the ACK field (parity field) in the acknowledgement frames 620 and 640 of Figure 3.

Regarding claim 10, "determining if at least one request parity bit for the packet request message is valid and determining if a request control code group message is valid" is anticipated by the distinguishing between an acknowledgement frame and a message frame using the TYPE field (request control code group) as spoken of on column 12, lines 36-43 as well as checking whether the parity matches parity bits comprised in the message frame (request parity bit) as described in column 13, lines 25-30.

Regarding claim 11, "comparing an acknowledge identification parameter associated with the request acknowledge message to a stored list of valid acknowledge identification parameters" is anticipated by the comparison of channel fields of a message and an acknowledgement spoken of in column 4, lines 38-48 where channel numbers (request and/or ACK identification parameters) correspond to a predetermined range of numbers (list of valid ACK identification parameters) as stated in column 6,

lines 17-20. "Determining if an acknowledge control code group associated with the request acknowledge message is valid; and determining if at least one acknowledge parity parameter is satisfied" is anticipated by the distinguishing between an acknowledgement frame and a message frame using the TYPE field (acknowledge control code group) as spoken of on column 12, lines 36-43 as well the ACK field in the acknowledgement frames 620 and 640 of Figure 3 as well as on column 11, lines 55-58, that is used to indicate whether a message has been received correctly.

Regarding claim 12, "determining if a first acknowledge parity bit associated with the acknowledge identification parameter is satisfied and determining if a second acknowledge parity bit associated with the acknowledge control code group is satisfied" is anticipated by the ACK field in the acknowledgement frames 620 and 640 of Figure 3 as well as on column 11, lines 55-58, that is used to indicate whether a message has been received correctly.

Regarding claim 14, "transmitting a packet request message from a first station to a second station" is anticipated by the activation message 500 sent by apparatus 100 (first station) to apparatus 101 (second station) of Figure 2.

"The packet request message having a first identification number, a first control code group, and a first parity parameter associated therewith" is anticipated by the channel field (first identification number) of frame 630 of Figure 3, TYPE field (first control code group) of frame 630 of Figure 3, and the parity bits comprised in a message frame spoken of in column 13, lines 25-30 and shown in Figure 3.

"Storing the first identification number associated with the packet request message" is anticipated by storage means 300, which stores channel associated applications as stated in column 12, lines 60-64.

"Transmitting a request acknowledge message from said second station to said first station" is anticipated by the acknowledgement frame 502 sent from apparatus 101 (second station) to apparatus 100 (first station) of Figure 2.

"The request acknowledge message having a second identification number, a second control group, and a second parity parameter associated therewith" is anticipated by the channel field (second identification number) of frame 640 of Figure 3, TYPE field (second control group) of frame 640 shown in Figure 3, and the ACK field (parity field) in the acknowledgement frame 640 of Figure 3.

"Determining if the first and second control groups are valid" is anticipated by the distinguishing between an acknowledgement frame and a message frame using the TYPE field (control code group) as spoken of on column 12, lines 36-43.

"Determining if the second identification number matches the first identification number" is anticipated by the channel field comparison spoken of in column 4, lines 43-47.

"Determining if the first and second parity parameters are valid" is anticipated by the checking of whether the parity matches parity bits comprised in the message frame (first parity parameter) as described in column 13, lines 25-30 as well as the ACK field (second parity parameter) in the acknowledgement frames 620 and 640 of Figure 3 as

well as on column 11, lines 55-58, that is used to indicate whether a message has been received correctly.

“Wherein the first control group and the second control group are configured to identify whether a frame is a control frame or a data frame” is anticipated by the TYPE fields (control groups) shown in Figure 3 and spoken of on column 12, lines 36-43 that are used to distinguish between an acknowledgement frame (control) and a message frame (data).

Lastly, “wherein the first identification number and the second identification number are configured to correlate the packet request message with a corresponding request acknowledge message” is anticipated by the channel field (first identification number) shown in group frame 630 (packet request message) of Figure 3 that is copied (correlates) to the channel field (second identification number) of acknowledgment frame 640 (request acknowledgement message) of Figure 3 and that is used to filter acknowledgement messages as spoken of on column 4, lines 38-48 and column 12, lines 19-28.

Regarding claim 16, “the step of generating the packet request message” is anticipated by the activation message 500 sent by apparatus 100 (first station) to apparatus 101 (second station) of Figure 2. “Wherein said generated packet request message includes a first control group bit string, a first identification number bit string, a first parity bit corresponding to the first control group bit string, and a second parity bit corresponding to the identification number bit string” is anticipated by the channel field (first identification number bit string) of frame 630 of Figure 3, TYPE field (first control

group bit string) of frame 630 of Figure 3, and the parity bits comprised in a message frame spoken of in column 13, lines 25-30.

Regarding claim **17**, "generating the request acknowledge message" is anticipated by the acknowledgement frame 502 sent from apparatus 101 (second station) to apparatus 100 (first station) of Figure 2. "Wherein said generated request acknowledge message includes a second control group bit string, a second identification number bit string, a third parity bit corresponding to the second control group bit string, and a fourth parity bit corresponding to the second identification number bit string" is anticipated by the channel field (second identification number bit string) of frame 640 of Figure 3, TYPE field (second control group bit string) of frame 640 of Figure 3, and the ACK field (parity field) in the acknowledgement frames 620 and 640 of Figure 3.

Regarding claim **18**, "comparing the first identification number to the second identification number; and determining if the first identification number is identical to the second identification number" is anticipated by the channel field comparison spoken of in column 4, lines 43-47.

Regarding claim **19**, "receiving the first and second control groups in a flow logic control module; and determining if the first and second control groups are of a valid and recognized format" is anticipated by the distinguishing between an acknowledgement frame and a message frame in apparatus 101 (flow logic control module) of Figure 2 using the TYPE field (control code group) as spoken of on column 12, lines 36-43.

Regarding claim **20**, "wherein the first parity parameter further comprises a request identification parity bit and a request control code group parity bit" is anticipated by the parity bits comprised in a message frame spoken of in column 13, lines 25-30 as well as the channel field shown in frame 630 of Figure 3.

Regarding claim **21**, "determining if the request identification parity bit is valid and determining if the request control code group parity bit is valid" is anticipated by the checking of whether the parity matches parity bits comprised in the message frame (request parity bit) as described in column 13, lines 25-30.

Regarding claim **22**, "determining if the request identification parity bit represents the parity of the first identification number" is anticipated by the checking of whether the parity matches parity bits comprised in the message frame (request parity bit) as described in column 13, lines 25-30.

Regarding claim **23**, "determining if the request control code group parity bit represents the parity of the first control code group" is anticipated by the checking of whether the parity matches parity bits comprised in the message frame (request parity bit) as described in column 13, lines 25-30.

Regarding claim **24**, "wherein the second parity parameter further comprises an acknowledge identification parity bit and an acknowledge control code group parity bit" is anticipated by the ACK field (parity field) in the acknowledgement frames 620 and 640 of Figure 3.

Regarding claim **25**, "determining if the acknowledge identification parity bit is valid and determining if the acknowledge control code group parity bit is valid" is

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anticipated by the ACK field (parity parameter) in the acknowledgement frames 620 and 640 of Figure 3 as well as on column 11, lines 55-58, that is used to indicate whether a message has been received correctly.

Regarding claim **26**, "determining if the acknowledge identification parity bit represents the parity of the second identification number" is anticipated by the ACK field (parity parameter) in the acknowledgement frames 620 and 640 of Figure 3 as well as on column 11, lines 55-58, that is used to indicate whether a message has been received correctly.

Regarding claim **27**, "determining if the acknowledge control code group parity bit represents the parity of the second control code group" is anticipated by the ACK field (parity parameter) in the acknowledgement frames 620 and 640 of Figure 3 as well as on column 11, lines 55-58, that is used to indicate whether a message has been received correctly.

Regarding claim **28**, "a first transmitting unit for transmitting a packet request message from a first station to a second station, said packet request message including a first identification number, a first control code group, and a first parity parameter associated therewith" is anticipated by the activation message 500 sent by message sending means 200 (first transmitting unit) from apparatus 100 (first station) to apparatus 101 (second station) of Figure 2.

"The packet request message having a first identification number, a first control code group, and a first parity parameter associated therewith" is anticipated by the channel field (first identification number) of frame 630 of Figure 3, the TYPE field (first

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control code group) of frame 630 of Figure 3, and the parity bits comprised in a message frame spoken of in column 13, lines 25-30 and shown in Figure 3.

"Storage unit for storing the first identification number associated with the packet request message" is anticipated by storage means 300, which stores channel associated applications as stated in column 12, lines 60-64.

"A second transmitting unit for transmitting a request acknowledge message from said second station to said first station" is anticipated by the acknowledgement frame 502 sent by acknowledgement sending means (second transmitting unit) 220 from apparatus 101 (second station) to apparatus 100 (first station) of Figure 2.

"The request acknowledge message having a second identification number, a second control group, and a second parity parameter associated therewith" is anticipated by the channel field (second identification number) of frame 640 of Figure 3, TYPE field (second control group) of frame 640 of Figure 3, and the ACK field (parity field) in the acknowledgement frames 620 and 640 of Figure 3.

"At least one flow logic unit for determining if the first and second control groups are valid" is anticipated by the distinguishing between an acknowledgement frame and a message frame in apparatus 101 (flow logic control module) of Figure 2 using the TYPE field (control group) as spoken of on column 12, lines 36-43.

"Determining if the second identification number matches the first identification number" is anticipated by the channel field comparison spoken of in column 4, lines 43-47.

“Determining if the first and second parity parameters are valid” is anticipated by the checking of whether the parity matches parity bits comprised in the message frame (first parity parameter) as described in column 13, lines 25-30 as well as the ACK field (second parity parameter) in the acknowledgement frames 620 and 640 of Figure 3 as well as on column 11, lines 55-58, that is used to indicate whether a message has been received correctly.

“Wherein the first control group and the second control group are configured to identify whether a frame is a control frame or a data frame” is anticipated by the TYPE fields (control groups) shown in Figure 3 and spoken of on column 12, lines 36-43 that are used to distinguish between an acknowledgement frame (control) and a message frame (data).

Lastly, “wherein the first identification number and the second identification number are configured to correlate the packet request message with a corresponding request acknowledge message” is anticipated by the channel field (first identification number) shown in group frame 630 (packet request message) of Figure 3 that is copied (correlates) to the channel field (second identification number) of acknowledgment frame 640 (request acknowledgement message) of Figure 3 and that is used to filter acknowledgement messages as spoken of on column 4, lines 38-48 and column 12, lines 19-28.

Regarding claim 29, “wherein said first transmitting unit further comprises a first high speed interface of a first network switch” is anticipated by message sending means 200 (first transmitting unit) of apparatus 100 (first network switch) shown in Figure 2.

Regarding claim **30**, "wherein said second transmitting unit further comprises a second high speed interface of a second network switch" is anticipated by acknowledgement sending means 220 (second transmitting unit) of apparatus 101 (second network switch) shown in Figure 2.

Regarding claim **31**, "wherein said storage unit further comprises a memory within said first transmitting unit" is anticipated by storage means 300 of apparatus 100 coupled to message sending means 200 in Figure 2.

Regarding claim **32**, "a first flow control logic module, said first flow control logic module being positioned within a first network switch" is anticipated by channel activation means 240 (first flow control logic module) of apparatus 100 (first network switch). "A second flow control logic module, said second flow control logic module being positioned within a second network switch" is anticipated by channel activation means 240 (second flow control logic module) of apparatus 101 (second network switch).

Regarding claims **33, 35, and 37**, a packet request message comprising an ordered set is anticipated by frames 610 and 630 of Figure 3.

Regarding claims **34, 36, and 38**, a request acknowledge message comprising an ordered set is anticipated by frames 620 and 640 of Figure 3.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **13 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Beuk et al. (U.S. 5,774,673) in view of Meyer et al. (U.S. 6,611,495).

Regarding claims **13 and 15**, Beuk et al. teaches the methods of claims **1 and 14** as described above. Beuk et al. does not teach the starting of a timer upon transmission of a packet request message and retransmitting the message if a predetermined period of time has passed. However, Meyer et al. discloses a retransmission timer (REXMT) in column 2, lines 41-56 that times packet transmission according to a predetermined time period. At the time of the invention, it would have been obvious to someone of ordinary skill in the art given these references to combine the methods of each of claims **1 and 14** with a retransmission timer as described in the Meyer et al. reference. A motivation for doing so would be in order to have an effective transmission error recovery procedure as stated in column 2, lines 41-56 of the Meyer et al. reference.

Response to Arguments

5. Applicant's arguments filed 7/1/2005 regarding amended claims **1, 14, and 28**, have been fully considered but they are not persuasive.

Regarding claims **1, 14, and 28**, Applicant argues that the special header field (HDR) of Beuk et al. does not correspond to the "*control bit string*" of claims **1, 14, and 28**. However, in the previous Office Action, the grounds of rejection of this limitation were changed to indicate that the TYPE fields of Figure 3 anticipate the claimed "*control*

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bit string" as described above in the art rejection section. Therefore, this argument is rendered moot.

Applicant also argues that the channel field of Beuk does not correspond to the identification bit string of the claimed invention. However, as described above in the art rejection section, Beuk teaches the channel field (identification bit string) shown in group frame 630 (packet request message) of Figure 3 that is copied (correlates) to the channel field of acknowledgment frame 640 (request acknowledgement message) of Figure 3 and that is used to filter acknowledgement messages as spoken of on column 4, lines 38-48 and column 12, lines 19-28. It is held that this channel field anticipates an "*identification string*" configured to correlate a packet request message with a corresponding request acknowledge message.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mjm MM


FRANK DUONG
PRIMARY EXAMINER

Michael J. Moore, Jr.
Examiner
Art Unit 2666